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EXAMINER	
HOEL, MATTHEW D	

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3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/627,515	CANNON, LEE E.	
	Examiner	Art Unit	
	Matthew D. Hoel	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *49-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *49-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 49 to 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinek, et al. (U.S. pre-grant publication 2003/0130032 A1) in view of Arnold (EPO publication 0 661 675 A2, application 94117809.7, entered as FPL 10-27-2008).

4. As to Claims 49 and 54: Martinek in '032 discloses all of the limitations of Claims 49 and 54, but lacks specificity as to comparing first and second gaming data from first and second respective gaming organizations in the same embodiment. '032 in Paras. 83 and 90 teaches a first gaming organization being the Nevada Gaming Regulation Commission, a regulatory agency. Para. 83 of '032 teaches a second gaming organization being the game manufacturer or designer. Fig. 4 of '032 teaches decrypting a message digest created from a loadable data set via one public key 238 and its corresponding decryption program 230 and decrypting a signature via another public key 234 and its corresponding decryption program 232 (Fig. 4; Para. 81). '032 in Fig. 3 teaches taking a loadable data set 212 and creating a message digest 214 and

signature 220 via a public/private key pair 218 (Paras. 79 & 80). '032 teaches a gaming apparatus (Abst.). There is a display unit (108, Fig. 1); a value input device (104 & 105, Fig. 1); a controller operatively coupled to said display unit and said value input device, said controller comprising a processor and a memory operatively coupled to said processor (Fig. 5) and having first encrypted gaming data stored in the memory (message digest 228, Fig. 4, to be decrypted with decryption program 230) and second encrypted gaming data stored in the memory (signature 240, Fig. 4, to be decrypted with decryption program 231) , said first encrypted gaming data having been generated by encrypting gaming data utilizing an encryption key of a first gaming organization and said second encrypted gaming data having been generated by encrypting gaming data utilizing an encryption key of a second gaming organization,

said controller being programmed to retrieve said first encrypted gaming data from the memory (228, Fig. 4, Para. 81);

said controller being programmed to decrypt said first encrypted gaming data (decryption program 230, Fig. 4, decrypting message digest 228) utilizing an encryption key of said first gaming organization to form first decrypted gaming data;

said controller being programmed to retrieve said second encrypted gaming data from the memory (240, Fig. 4, Para. 81);

said controller being programmed to decrypt said second encrypted gaming data (decryption program 232, Fig. 4, decrypting signature 240) utilizing an encryption key of said second gaming organization to form second decrypted gaming data; and

said controller being programmed to determine whether said first decrypted gaming

data is identical to said second decrypted gaming data (comparing step 236, Fig. 4, Para. 81). '032 teaches enabling a game play operation on the gaming apparatus upon determining that the first encrypted gaming data is identical to the second encrypted gaming data. Para. 73: "The computerized game controller also executes game code, which may be loaded into memory 203 from either a mass storage device 205 such as a hard disc drive, or nonvolatile memory 204 such as flash memory or EPROM memory before execution. In some embodiments, the computerized game controller 201 loads encryption functions into memory 203, and those functions are *subsequently executed* to securely load other gaming system data from the mass storage device 205." (emphasis added). The system also prevents data from subsequently loading if it cannot be authenticated or from subsequently running if it cannot be authenticated (Para. 80). The determination of the first (decryption step 232) and second encrypted data sets (decryption step 230) being the same (comparison step 236) is conducted in Fig. 4 (Para. 81). What '032 lacks is first encrypting gaming data with a first key from a first gaming organization and a second key from a second organization and decrypting the gaming data with the first and second keys from the first and second gaming organizations. '032 does teach first and second gaming organizations, and decrypting first gaming data with one public key and second gaming data with a second public key and then comparing the two gaming data as outlined above. The examiner believes that first encrypting gaming data with a first key from a first gaming organization and a second key from a second organization and decrypting the gaming data with the first and second keys from the first and second gaming organizations is obvious in light of

Arnold (‘675). Regarding decrypting a first data set with a key from a first gaming organization and decrypting a second data set with another key from a second gaming organization and comparing them to see if they are equal, ‘032 teaches first and second organizations as being a game developer and a state gaming commission, respectively, as outlined above. ‘032 also teaches decrypting two separate data sets with two separate keys, comparing the decrypted data sets, and continuing execution if they are identical as outlined above. The aspect of having the two data sets each being decrypted with respective keys from respective gaming organizations is obvious as outlined by the 103 combination below, and as was last explained in the last office action; all of the elements of the claim were already in ‘032—they simply needed the obviousness teachings of ‘675 as outlined below to combine the different teachings (or "embodiments" as there is no clear separation of these two teachings into clearly separate embodiments upon a review of '032 as '032's description moves from one aspect to another). The new limitations do not change the scope of the claim language as they were already addressed above and in the last office action; they merely paraphrase the previous claims without adding any new limitations. Enabling a game play is not really a substantial new limitation to the claim as it was "anticipated" by the base reference ('032). ‘675 in Figs. 3, 4, and 5 shows a data set being encrypted with separate keys from separate entities (a user and a supervisor, analogous to a game developer and a Gaming Commission, respectively, of ‘032). Fig. 3, 5:44-6:3 of ‘675 describes a data set Xsup being encrypted with a supervisor's session key KS1. Fig. 4, 6:4-19 of ‘675 describes the same data set with a user’s session key KS2. Fig. 5, 6:20-

7:20 of ‘675 describes the computation of the decryption value using the supervisor’s session key KS1 to recover Xsup and the computation of the decryption value using the user’s session key KS2 to recover Xsup. If the two recovered values of Xsup are the same, the desired activity is allowed to continue (steps 65, 69, 71, Fig. 1). The modification the examiner is proposing to make is to apply this parallel encryption and decryption using two separate keys from two organizations to Figs. 3 and 4 of '032. The game developer's public/private key pair 218 (Fig. 3) and corresponding encryption program 216 (Fig. 3) and decryption program 230 (Fig. 3) would be used to provide a message digest and signature to the casino operating the gaming machine. The public key of the game developer would be known to the casino and the private key would be only known to the developer. The game developer would also supply the game data loadable set (212 of Fig. 3 and 224 of Fig. 4) to the Gaming Commission, which would sign the loadable data set with its own public/private key pair 218 (Fig. 3) and corresponding encryption program 216 (Fig. 3) and decryption program 232 (Fig. 4), as suggested by ‘032 (Para. 83). The Gaming Commission’s public key would be known to the casino and the private key would be known only to the gaming commission. The casino would proceed as described in Fig. 4 of '032 and decrypt the message digest 228 received from the game developer using the game developer's public key 238 and corresponding decryption program 230 and decrypt the signature using the Gaming Commission’s public key 234 and corresponding decryption program 232. If the two values are equal, as in step 236 (Fig. 4 of ‘032, corresponding to step 65 of ‘675’s Fig. 5), the gaming activity would be allowed to proceed. Even though the message digest

236 would be received by the casino from the game developer and the signature 240 would be received from the Gaming Commission, they would be the same when decrypted (if authentic), because the were both generated from the same loadable data set (224 of Fig. 4 corresponding to 212 of Fig. 3, '032) developed by the gaming manufacturer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the parallel encryption and decryption of '675 (Figs. 3 to 5) as described above to the parallel decryption of '032 (Fig. 4). Both references are analogous in that the supervisor of '675 corresponds to the Gaming Commission of '032 and the user of '675 corresponds to the game developer of '032. Both references teach parallel decryption with separate keys and comparing two values to see if they are equivalent as described above. The result is simply a superposition of known encryption techniques. The modification would have the effect and advantage of keeping the Gaming Commission always in the loop, so that casinos would not be able to decrypt and use software updates from game developers until they have been evaluated and digitally signed by the Gaming Commission ('032, Para. 57). '032 even suggests the decryption being done in the presence of two persons to ensure security (Para. 138). The use of the data set Xsup as taught by '675 would have an advantage in that the game data set could only be decrypted in the presence of a Gaming Commissioner or delegate representative thereof (the supervisor of '675).

5. As to Claims 50 and 55: The display unit of '032 generates a game display representing poker, blackjack, slots, keno, or bingo (Paras. 7 & 21).

6. As to Claims 51 and 56: '032 teaches said first gaming data comprising substantially all gaming data necessary to facilitate play of a casino game (self-contained, functional units defining operation of game, Para. 78; see also Fig. 6, Para. 97).

7. As to Claims 52 and 57: '032 teaches said display unit comprising a video display unit that is capable of generating video images (Para. 7, 67).

8. As to Claim 53: The first organization is a game data authorizing organization being the game developer ('032, Para. 89), and the second organization is a gaming regulatory organization being a state gaming commission ('032, Para. 89).

Claim Rejections - 35 USC § 101

1. Claims 54 to 57 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As required by page 10 of the recent Bilski decision (Court of Appeals for the Federal Circuit, 2007-1130), all claims must be either tied to a particular apparatus or to a physical transformation of matter from one composition to another. Physical transformations are seldom encountered in the gaming arts. One way to tie independent Claim 54 to a particular apparatus would be to cite how the particular structures of the apparatus carry out the respective steps of the method. Quoting from *ex parte Cornea-Hasegan* (89 USPQ2d 1557) at 1559 & 1560: "The *Bilski* court, following Supreme Court precedent, 1 enunciates the machine-or-transformation test as follows: "A claimed process is surely patent-eligible under §101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article

into a different state or thing." *Id.* at 954; *see also In re Comiskey*, 499 F.3d 1365, 1377 [84 USPQ2d 1670] (Fed. Cir. 2007) (discussing the same test from *Diehr*, 450 U.S. 175 [209 USPQ 1]). ¶ Process claims directed to fundamental principles — including laws of nature, natural phenomena, and abstract ideas — mental processes, or mathematical algorithms are unpatentable. *Bilski*, at 951-52. A process claim that is tied to a specific machine may be patentable under §101. *Id*. at 961; *Comiskey*, 499 F.3d at 1377. ¶ While the *Bilski* court declined to elaborate on the "machine" branch of the test, it did provide some guidance on the issue. The court explains that "the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility" and "the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity." *Bilski*, at 961-62 (internal citations omitted). As *Comiskey* recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." *Comiskey*, 499 F.3d at 1380 (citing *In re Grams*, 888 F.2d 835, 839-40 [12 USPQ2d 1824] (Fed. Cir. 1989)). ¶ Nominal recitations of structure in a method claim do not convert an otherwise ineligible claim into an eligible one. *Bilski*, at 957. *See also Benson*, 409 U.S. at 68-69 (comparing *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1854), to *The Telephone Cases*, 126 U.S. 1 (1888) – the Court explained that Morse's eighth claim was disallowed because it failed to recite any machinery, however, Bell's claim was patentable because it recited specified conditions for using a particular circuit); *In re Schrader*, 22 F.3d 290, 294 [30 USPQ2d 1455] (Fed. Cir. 1994) (holding a simple recordation step in the middle of the claimed process

incapable of imparting patent-eligibility under §101); *In re Grams*, 888 F.2d at 839-40 (holding a pre-solution step of gathering data incapable of imparting patent-eligibility under §101)."

2. Quoting from *ex parte Halligan* (89 USPQ2d 1355) at 1364 & 1365: "Process claims 122 and 123 recite a series of process steps that are not tied in any manner to a machine. In other words, these claims do not limit the process steps to any specific machine or apparatus. Thus, the claims fail the first prong of the machine-or-transformation test because they are not tied to a particular machine or apparatus. The steps of process claims 122 and 123 also fail the second prong of the machine-or-transformation test because the data does not represent physical and tangible objects. Rather, the data represents information about a trade secret, which is an intangible asset. Thus, the process of claims 122 and 123 fails the machine-or-transformation test and is not patent-eligible under 35 U.S.C. §101. Process claims 119 and 120 recite "a programmed computer method" in which each of the process steps is performed by the programmed computer. The issue presented by these claims is whether recitation of a programmed computer suffices to tie the process claims to a particular machine. This is the exact issue that the court in *Bilski* declined to decide. *Bilski* at *11. The court did, however, provide some guidance when it explained that the use of a specific machine must impose meaningful limits on the claim's scope to impart patent-eligibility. *Id.* Claims 119 and 120 recite a method performed on a programmed computer. This recitation fails to impose any meaningful limits on the claim's scope as it adds nothing more than a general purpose computer that has been programmed in an unspecified

manner to implement the functional steps recited in the claims. Were the recitation of a "programmed computer" in combination with purely functional recitations of method steps, where the functions are implemented using an unspecified algorithm, sufficient to transform otherwise unpatentable method steps into a patent eligible process, this would exalt form over substance and would allow pre-emption of the fundamental principle present in the non-machine implemented method by the addition of the mere recitation of a "programmed computer." Such a field-of-use limitation is insufficient to render an otherwise ineligible process claim patent eligible. *Bilski*, slip. op. at 15, citing *Diehr*, 450 U.S. at 191-92 (noting that eligibility under §101 "cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.")."

3. The claims have been written to have a concrete, tangible, and useful result because they have been amended to incorporate allowing the player to play the game in the event the authentication of the decrypted data is made. The Bilski decision has come out since the last action, so now a claim must be tied to a particular apparatus or a transformation of matter from one composition to another. Citing how specific structures of the apparatus, such as the apparatus of independent claim 49, carry out the specific method steps of independent claim 54 would server to tie the method claim of 54 to an apparatus. These are only suggestions. The examiner notes that the test for a concrete, tangible, and useful result is no longer used, but a concrete or tangible action or method step taken by an apparatus structure can serve to tie the claim to a particular apparatus. Exact suggestions are hard to provide, as the examiner is unsure how the applicant will want to amend the claims in light of Bilski. For typical

claims pertaining to a gaming device, the examiner will provide suggestions as accepting a wager from a player via a bill/coin slot or credit/debit card reader on a gaming machine; accepting input from a player via an input device on the gaming machine, such as a slot handle, touchscreen, keyboard, mouse, buttons, joystick, or trackball; manipulating the input data in physical memory by the gaming machine's processor according to the rules of the game stored in memory; displaying the output or game result to the player via an output device on the gaming machine such as a display; and remitting to the player any winning outcome via a bill/coin hopper or credit/debit card writer on the gaming device. Such limitations serve to tie the claim to a particular apparatus by showing how the respective structures of the apparatus carry out the respective steps of the method. The structural limitations must be meaningful to the claim as a whole and not trivial, as outlined above.

Response to Arguments

4. Applicant's arguments filed 02-20-2009 have been fully considered but they are not persuasive. '032 teaches enabling a game play operation on the gaming apparatus upon determining that the first encrypted gaming data is identical to the second encrypted gaming data. Para. 73: "The computerized game controller also executes game code, which may be loaded into memory 203 from either a mass storage device 205 such as a hard disc drive, or nonvolatile memory 204 such as flash memory or EPROM memory before execution. In some embodiments, the computerized game controller 201 loads encryption functions into memory 203, and those functions are

subsequently executed to securely load other gaming system data from the mass storage device 205." (emphasis added). The system also prevents data from subsequently loading if it cannot be authenticated or from subsequently running if it cannot be authenticated (Para. 80). The determination of the first (decryption step 232) and second encrypted data sets (decryption step 230) being the same (comparison step 236) is conducted in Fig. 4 (Para. 81). What '032 lacks is first encrypting gaming data with a first key from a first gaming organization and a second key from a second organization and decrypting the gaming data with the first and second keys from the first and second gaming organizations. '032 does teach first and second gaming organizations, and decrypting first gaming data with one public key and second gaming data with a second public key and then comparing the two gaming data as outlined above. The examiner believes that first encrypting gaming data with a first key from a first gaming organization and a second key from a second organization and decrypting the gaming data with the first and second keys from the first and second gaming organizations is obvious in light of Arnold ('675). Regarding decrypting a first data set with a key from a first gaming organization and decrypting a second data set with another key from a second gaming organization and comparing them to see if they are equal, '032 teaches first and second organizations as being a game developer and a state gaming commission, respectively, as outlined above. '032 also teaches decrypting two separate data sets with two separate keys, comparing the decrypted data sets, and continuing execution if they are identical as outlined above. The aspect of having the two data sets each being decrypted with respective keys from respective

gaming organizations is obvious as outlined by the 103 combination below, and as was last explained in the last office action; all of the elements of the claim were already in ‘032—they simply needed the obviousness teachings of ‘675 as outlined below to combine the different teachings already present in ‘032(or "embodiments" as there is no clear separation of these two teachings into clearly separate embodiments upon a review of '032 as '032's description moves from one aspect to another). The new limitations do not change the scope of the claim language as they were already addressed above and in the last office action; they merely paraphrase the previous claims without adding any new limitations. Enabling a game play is not really a substantial new limitation to the claim as it was "anticipated" by the base reference ('032). Pages 5 to 11 of the remarks generally characterize the teachings of the references. Regarding the remarks on page 7, Fig. 4 and Para. 81 of '032 teach separate public keys; a review of the '032 reference does not indicate that having the public keys being from separate gaming organizations such as a game developer and a state gaming commission would render the decryption system inoperable for its intended purpose or alter its mode of operation. In the 103 combination as described above, the game developer would pass the original data set to the gaming commission for evaluation and approval, and the gaming commission would encrypt the data set with its own private signature if the data set met all regulations and was approved. The game developer would, of course, have the original data set as they would be the ones who developed the game. They would sign the data set with their own private signature. The two decrypted data sets, decrypted with the separate public keys (the

private keys remaining private) would then be compared and the game would be allowed to proceed if the data sets are identical, indicating that no tampering had taken place. Regarding the comments on page 12, the examiner was not relying on the fact that the keys of '675 were session keys. The examiner was pointing out that the separate entities, the user and the supervisor, were analogous to the entities of '032, being the game developer and the gaming commission, respectively. The supervisor of '675 has authority over the user in the same manner that the gaming commission of '032 has authority over the game developer. In both processes, the same set of game data is encrypted with two separate keys, decrypted with two separate keys, and an action is allowed to take place if the two decrypted data sets are identical ('032, Fig. 4, Para. 81; '675, Fig. 5, 6:20-7:35, esp. 6:33-45, 6:54-7:3, 7:6-10,23-27), so the two processes are clearly analogous. '032 uses public-private key pairs and '675 uses session keys. The public-private key pairs of '032 has the advantage in that the data set can be signed by each entity with a private key that is not divulged, and decrypted with each entity's known public key, so each decrypted data set is positively identified as having been encrypted by the respective party, without each party's private key being divulged. The examiner respectfully disagrees with the applicant as to the claims' condition for allowance.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571) 272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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